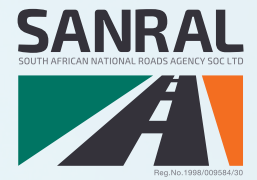


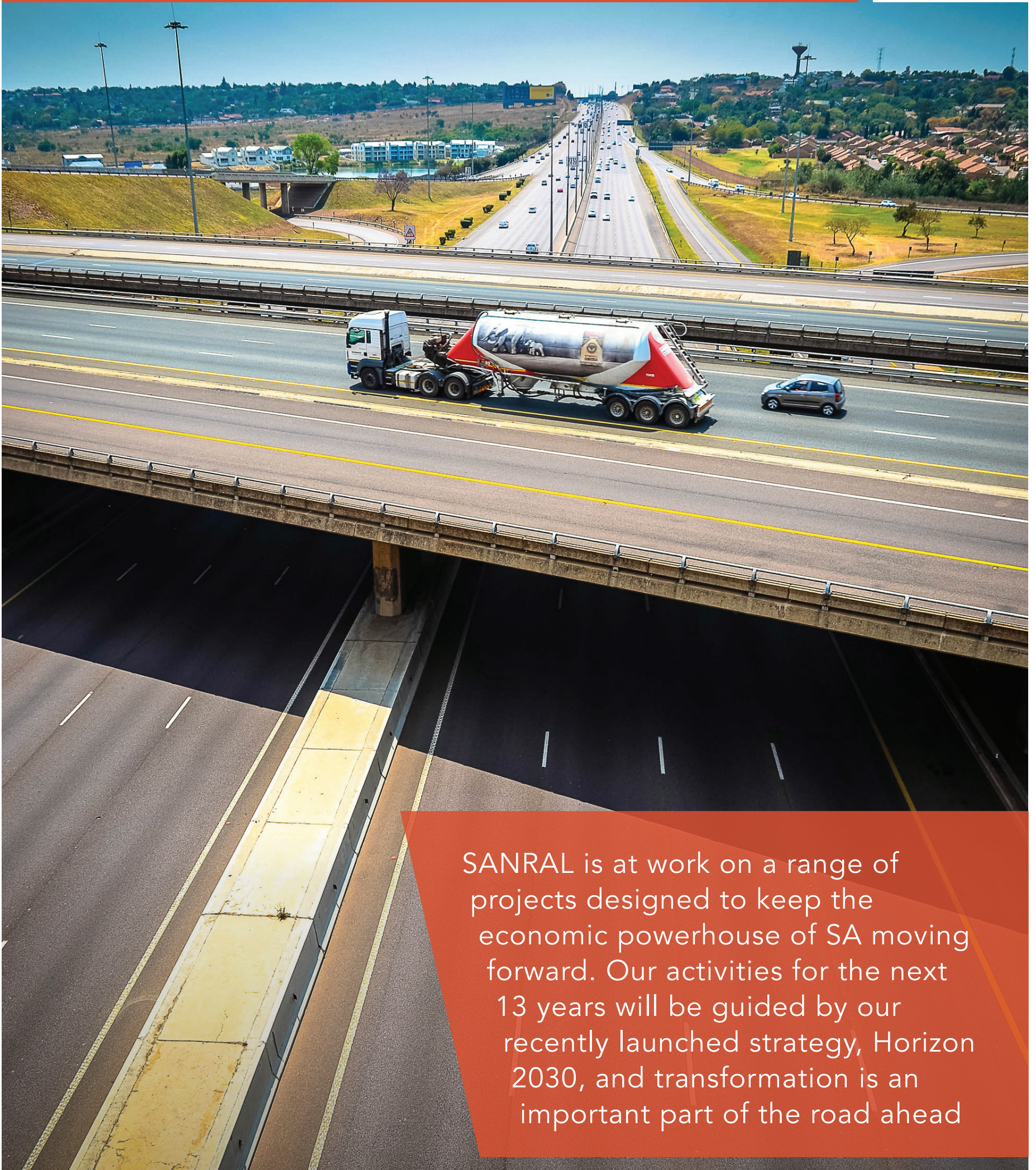


2017



PRODUCED  
BY SANRAL

# GAUTENG



SANRAL is at work on a range of projects designed to keep the economic powerhouse of SA moving forward. Our activities for the next 13 years will be guided by our recently launched strategy, Horizon 2030, and transformation is an important part of the road ahead



transport

Department:  
Transport  
REPUBLIC OF SOUTH AFRICA

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Skhumbuzo Macozoma

GREETINGS to GP residents! It gives me great pleasure to share some of our work in this vibrant and dynamic province. Our achievements would not have been possible without the valuable partnerships we enjoy with key stakeholders in Gauteng.

Due to the current economic climate, SANRAL, like many other institutions, faces the challenge of inadequate funding to expand and maintain the network of road infrastructure required in Gauteng. This is a serious challenge that threatens to slow down the pace of infrastructure development across the country. However, through engagement with National Treasury, our shareholder (represented by the Minister of Transport), provincial and local roads authorities, industry and road users, we remain confident that we will find solutions for the upkeep of the road network.

We have started engagements on the planning required for the expansion of the freeway network in Gauteng, to ensure mobility and safeguard the

# OUR WORK DRIVES SA'S ECONOMIC HUB

economy of the province. This process is crucial, because the existing freeways are projected to suffer serious congestion in the medium term. SANRAL realises the importance of finding a solution to the challenge presented by e-tolls. We will continue to engage in this regard, led by the Minister of Transport. It is our hope that the Minister will soon be able engage his Cabinet colleagues on the options available to the government to address this matter.

Our partnerships with other road authorities and metropolitan governments in Gauteng are showing visible results. Most road users will be familiar with the major roadworks that have been in progress for the past two years on the M1 freeway running through Johannesburg. This was a collaboration between SANRAL and the Johannesburg Roads Agency and included major improvements to the road and repairs to some critical bridges.

We are also working closely with the province and the RTMC to improve road safety through the deployment of intelligent transport systems to ensure effective law enforcement and road network surveillance.

Design work is under way for upgrading the Gauteng section of the R573 Moloto Road. This road traverses the three provinces – Gauteng, Mpumalanga and Limpopo – and we have already started construction on the Mpumalanga and Limpopo sections. Not only will the improved road make for safer travel; it will ensure seamless mobility and help stimulate the regional economy.

There are many considerations that go into maintaining our national roads. Climate change has made flash-floods more extreme when they occur and these floods have serious implications for our

national infrastructure and mobility. Following a major downpour in late 2016 – described as a 1-in-200-year flood – SANRAL's engineers have carried out major inspections of the road network and maintenance teams have cleared drainage systems that were blocked by debris and obstructions.

We have reviewed SANRAL's journey over the past 19 years and have developed a new long-term strategy, Horizon 2030. Launched by the Minister of Transport in September 2017, the strategy outlines our focus over the next 13 years in terms of road infrastructure, community development, road safety, research and innovation, skills development and funding sustainability. The strategy also provides a framework for transformation that seeks to ensure inclusivity in the economic activities generated by SANRAL. A Transformation Policy has been drafted, which outlines the interventions to be pursued to ensure increased participation of black business across various sectors, with the necessary support mechanisms.

We will intensify our bursary and scholarship programmes, using our employment equity targets as a guideline. Supporting deserving students creates a solid pipeline for the SANRAL workforce and it contributes to a skills pool that will benefit the entire market.

SANRAL has a long road ahead, but we are confident that we will realise the goals and objectives set for us by the government through the strengthening of existing and establishment of new relationships. And Gauteng, as the country's industrial heartland, occupies a strategic position in those relationships. ■

Skhumbuzo Macozoma is SANRAL's CEO

# SANRAL'S NEW PATH TO INCLUSIVE GROWTH



THE country's road infrastructure can play a major role in meeting the objectives for growth and economic transformation envisaged in the National Development Plan (NDP).

Gauteng, the hub of economic activity of southern Africa, will play a huge role in this regard. The bulk

of the country's road infrastructure, worth billions of rands, runs through this province. It is bordered by four provinces and located in close proximity to four neighbouring countries, providing access to ports and markets in the entire region.

SANRAL's role as the custodian of the country's primary road network was highlighted by Minister of Transport Joe Maswanganyi when he recently launched the agency's draft Transformation Policy and long-term strategy, Horizon 2030.

He noted that South Africa has embarked on a process of fundamental transformation that clears the path for inclusive economic growth and development. Broad-based transformation will mobilise investment, create jobs and empower citizens.

The government is determined to change the face of the economy to reflect properly the demographics of the country. This process will be guided by the NDP.

A key objective of the NDP is to unlock opportunities to ensure the economic participation of previously disadvantaged people. Gauteng can



play a huge role in this endeavour and the freeway network that criss-crosses the province contributes greatly towards economic activity, job creation and the growth of emerging companies.

SANRAL's asset base is a huge enabler for key sectors of the economy. Minister Maswanganyi encouraged entities and companies in both the public and private sectors to take their cue from SANRAL.

A consultative process on SANRAL's Horizon 2030 and Transformation Policy is under way nationally. The national roads agency has committed to engage small and big business across various industries.

The Minister urged stakeholders to participate in the process and ensure wide-ranging ownership of this new trajectory that intends to advance enterprises owned by black youth, women and the disabled. ■



# SAFE CROSSINGS FOR EAST RAND PEDESTRIANS



- In the Springs/Brakpan area, an 82.4m-long pedestrian bridge was constructed to cross the freeway at an angle. It consists of two prestressed, variable-section girders with main spans of more than 40m. Stone pitching was placed beneath the bridge to prevent people from making fires that could compromise safety and cause the bridge to deteriorate.
- Slightly to the west, another pedestrian bridge now connects KwaThema with Springs and Brakpan. The bridge has a clearance of 6.3m and is supported on two variable-section, Y-shaped, reinforced concrete columns.
- Closer to Johannesburg, the N7 passes close to busy public facilities such as Wemmer Pan, City Deep and the Joburg Market. The new KwaThema pedestrian bridge will address major safety concerns related to people crossing the freeway at a stretch that carries a lot of traffic. The new self-anchored suspension bridge has a main span of 57m, with a reinforced concrete deck suspended from stress bars.

**“An important part of our work is to ensure our roads are safely engineered for all road users.”**

The new SANRAL bridges are welcome additions for the communities whose lives are being improved.

“The bridge changed our lives,” said Sibongile Sibya, the ward committee member representing the Mkhancwa informal settlement in the Springs/Brakpan area. “Before the pedestrian bridge was constructed, there were multiple deaths,” he said. ■

THE safety of pedestrians on the East Rand has improved significantly with the construction of three new pedestrian bridges across the busy N17 between Springs and Johannesburg.

The three bridges constitute a R90m investment in road safety and engineering excellence by SANRAL, which is responsible for the management of this important regional road. The N17 is a national toll route that runs from Gauteng, through Mpumalanga, to the Swaziland border.

Pedestrian safety has been a major concern in the urban areas of Ekurhuleni and eastern Johannesburg. Several pedestrians and cyclists trying to cross the busy double-carriageway have been hit by vehicles in recent years.

SANRAL’s solution was to construct three new pedestrian bridges across the freeway – in line with its commitment to provide safe road infrastructure. The new bridges were completed in August 2017.

SANRAL Project Manager Tshidi Lethale said: “An important part of our work is to ensure our roads are safely engineered for all road users.

“Pedestrians are the most vulnerable road users. That is why the safety needs of pedestrians and cyclists are considered in the planning, design and implementation of road infrastructure.”

No detail is spared during the design and construction phases and once the bridges are built, they are maintained, cared for and inspected rigorously.

All the bridges have rest points for the elderly and disabled, and concrete bollards at the entrances prevent cars from driving on the surfaces.





# SANRAL SWIFTLY ATTENDS TO BRIDGE COLLAPSE



ON 9 AUGUST 2017, the country woke up to the news of a collapsed bridge over the N3, on the section of road between the Van Buuren and the M2 Geldenhuys interchanges.

The bridge was constructed in 1978 to provide pedestrian access between the mining operations on the Germiston side to the east and the Geldenhuys Railway Station to the west. The mining operation ceased some years ago and the bridge had been closed to pedestrian traffic since.

Three people were seriously injured in the collapse – one was airlifted to hospital and two were transported by ambulance. Fortunately, there were no fatalities.

Emergency services arrived at the scene with SANRAL engineers to ascertain the cause of the collapse and facilitate the clean-up of the road. A decision was taken to demolish and dismantle completely the remainder of the bridge. Experts thought this would take two days to complete and the road was closed to motorists for the rest of the day.

“I was astounded at the swift and excellent response to clear everything for Thursday morning – they did such a great job you wouldn’t have even known a bridge had collapsed.”

An investigation later revealed that the collapse had been caused by an impact force on the central pillar (or “pier”). All evidence suggested that the impact was caused by an 18.1-ton coil of steel, which was found lying 100m north of the collapsed bridge. Marks on the road led directly from the point of impact to the position where the steel coil came to rest.

The weight of the coil, moving at speed, could create an impact force far greater than the pier’s capacity. Debris was scattered radially away from the pier to a distance exceeding 40m, which confirms that the external impact force was massive.

The bridge had last undergone an inspection in July 2016 and there were no concerns about the main structural elements.

The road was reopened to motorists the very next day, on 10 August. SANRAL and the local authorities garnered praise on how they handled the collapse and made sure that motorists were not inconvenienced.

In a letter to SANRAL, Franesca Pyatt from Edenvale wrote: “I was astounded at the swift and excellent response to clear everything for Thursday morning – they did such a great job you wouldn’t have even known a bridge had collapsed. I travel daily to work and back from Edenvale to Park Central, Selby, and that really would have been a crazy amount of traffic to divert. Well done and thank you for the swift response.” ■

# KEEPING THE FREEWAYS LIT



IT’S easy not to think about all the lights on the inner-Gauteng freeways when you’re driving along them. But without these lights, road users would be less safe. There are about 16 000 of them and SANRAL manages to keep 90% burning continuously.

Maintaining this target not only contributes to the safety of motorists, it is a cost-effective way to reduce the number of vehicle crashes on our highways at night. Good lighting has implications for maintenance and repair costs and emergency services.

“A fundamental aspect of ensuring the safety of all road users is visibility – ensuring road users can see the entire road surface clearly and can also be seen by other road users at any time of day,” explains Hardy Johnson, who heads up SANRAL’s Electrical Maintenance in the Northern Region (Gauteng, Mpumalanga, Limpopo and North West).

“By having well-lit freeways, people who work later shifts can drive home late at night without finding it too stressful – and they feel safer driving at night.”

Considering there are 4.2 million registered vehicles in Gauteng and 1.49 million recorded trips on the e-toll road network daily, lighting is very important.

“Besides ensuring improved visibility, highway lighting also improves accessibility – the ease with which road users can travel between destinations. It also enhances mobility – ie the ability to reach a destination with a minimum of delay,” says Johnson.

“Maintaining the lights on our freeways is not without its challenges. The lights are subjected to damage from vehicle crashes, theft, weather and power outages. But at SANRAL we manage to keep our burn rate above 90%, for the benefit of all who use our roads.” ■





# DR ISMAIL VADI'S VIEW ON GP ROADS

GROWING congestion on Gauteng’s freeways has an impact on the economic potential of the province. The existing road infrastructure must be well maintained while planning is done for new roads to meet the demands of an expanding population. Dr Ismail Vadi has been the MEC for roads and transport in Gauteng for the past seven years. We got the chance to talk to the MEC about plans to grow the province’s primary road network. Here’s how it went...

### How does the road network fit into Gauteng’s long-term development plans?

Roads connect people and enable citizens to move within the province, commuting to and from work, visiting family, getting to holiday destinations or places of worship. Apartheid planning kept communities apart, so well-developed road and transport infrastructure is important to connect and integrate people across historical divides.

### What are the province’s top road infrastructure priorities?

It is important that we maintain the existing road

network. We spend a lot of time, energy and resources on maintenance and upgrading. It does not make sense to build new roads if we do not maintain the existing ones.

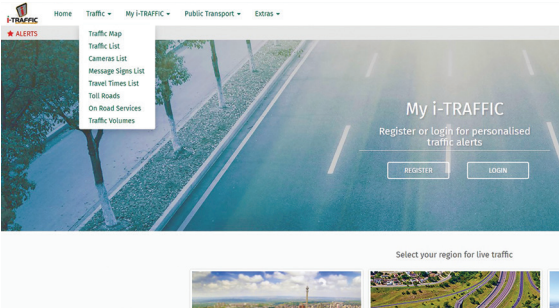
Then we have to expand the network to meet the demands of higher traffic volumes. This may entail the widening of roads, the conversion of single roads into dual carriageways or entirely new developments. We have seen the growth of new townships and informal settlements and these communities must all have access to good-quality roads.

### How has SANRAL contributed to the Gauteng road network?

The province enjoys a very close and constructive relationship with SANRAL. Our officials work closely with the agency on most major construction projects and we benefit from the expertise they offer in areas such as the design and planning of roads.

SANRAL played an important role in the upgrading of the M1 from the Allandale off-ramp to Corlett Drive and we will also work together on the Gauteng portion of the upgraded Moloto Road. ■

## MORE ROAD INFO AND FASTER



MORE road traffic information is now more readily accessible on SANRAL’s freeway road network. The Freeway Management System (FMS) on these roads includes the collection, processing and dissemination of real-time traffic data from a centralised Traffic Management Centre. Road users are able to access this information through multiple platforms.

At the heart of this information platform are the Advance Traveller Information System (Atis) and the Advance Transport Management System (ATMS) software programs, which have both undergone significant updates to add additional functionality. The new Atis was rolled out early in November. It

has several new user-friendly features:

- A single, adaptive display that will automatically align itself with the device being used, whether a computer monitor, tablet, or smartphone
- An updated trip-planning and congestion-alerting tool that provides door-to-door travel times and provides congestion and incident alerts based on user profiles
- A new My Cameras feature will allow users to add their most frequently viewed cameras to a user’s i-traffic.co.za homepage
- An overall enhanced look and feel and improved usability and user experience

The SANRAL FMS is among the richest and most complete sources of incident and traffic data for the road network covered. The enhanced ATMS includes a data warehouse and a data visualisation engine.

The warehouse will now make data easily accessible in near-real-time and archived by transport management professionals within SANRAL, as well as professionals in municipal and provincial partner organisations and other key transport partners.

Additionally, the data can be accessed readily by universities and research and development institutions to gain further insights and to promote

innovation into ways to improve mobility and safety on the freeway network.

This data warehouse is being accompanied by a powerful data visualisation platform, using commercial program Tableau. Using customisable dashboards, transport planners, engineers and technicians will be able to glean insights on key transportation parameters, such as critical incident hotspots, correlated with variables such as weather, day of week, network flow and speeds.

These tools are expected to provide the rich FMS dataset to a broad network of transport professionals to improve network operations, planning and design and, more importantly, safety and the road user experience.

### BREAKDOWN ASSISTANCE

As the safety of road users is SANRAL’s main concern, the agency will, in the event of a breakdown on the freeway, remove the vehicle free of charge to the nearest drop-off point. Arrangements from there will then be for the account of the motor vehicle owner.

### CONTACT DETAILS

Any incident on the Gauteng freeway can be reported to:

- Gauteng @ittrafficgp
- T:0800 itraff(0800 487 233) | 012 762 4300
- E:contact@i-traffic.co.za | W: www.i-traffic.co.za

## BUSY URBAN ARTERY GOOD TO GO



MEC Ismail Vadi, Premier David Makhura and Mayor Mashaba launch the M1 project

ONE of Africa’s busiest urban freeways received a major facelift through a multimillion-rand partnership between SANRAL and the Johannesburg Roads Agency.

Large sections of the M1 freeway, which bisects the city from north to south, were rehabilitated over a three-year period in a project that was managed by SANRAL. This demonstrates the productive relationship between SANRAL and other provincial and metropolitan roads authorities across all nine provinces, said CEO Skhumbuzo Macozoma.

The project represents the single biggest upgrade ever to the primary access route into southern Africa’s largest city and the commercial hub of the region.

The road was first built in 1967, but the rapid growth in the volume of traffic over the subsequent 50 years has necessitated the addition of new lanes and upgraded safety measures.

The rehabilitation of the road forms part of a R110bn investment in infrastructure, announced by the city of Johannesburg in 2015. Construction

started in the same year and included the comprehensive rehabilitation of the road surface, structural repairs, upgraded drainage systems and the addition of new road signs.

The overpass bridges at Oxford and Federation Streets underwent major upgrades, while critical off-ramps on both the northbound and southbound sides were widened to accommodate the higher traffic volumes.

From an engineering perspective, the project was a major accomplishment. Construction had to take place while the road was still being used by private and commercial vehicles, buses and taxis. This required temporary closures of lanes during peak-hour periods and major work done in the evenings and at weekends.

The Executive Mayor of Johannesburg, Herman Mashaba, opened the completed project during October Transport Month 2017. ■





# FREQUENTLY ASKED QUESTIONS

## **What is the state of SANRAL's road network in the Gauteng Province?**

The national road network in Gauteng is in a fairly good condition. The N1, N3, N12 and R21 were improved as part of the Gauteng Freeway Improvement Project (GFIP). Most of the interchanges that were improved as part of GFIP are still within capacity limits.

## **What's SANRAL's preventative maintenance plan to ensure its roads remain within international norms?**

SANRAL focuses on the effective maintenance of its roads through ongoing routine road maintenance contracts. These contracts generally run for three years with an option for a two-year extension, depending on the performance of the maintenance contractor and supervision team.

Currently, SANRAL has five routine road maintenance and three freeway lighting contracts for all its roads in Gauteng.

Overload control is important for preventing premature deterioration of our roads. On the N3 in Heidelberg and the N4 in Donkerhoek, effective overload control in the corridor is being carried out.

## **What's new for SANRAL in Gauteng?**

SANRAL is working on periodic maintenance (repair and reseal) on the freeways as part of the agency's asset-preservation strategy.

The following sections of the freeways that were not part of GFIP have a number of projects in the design and construction stages:

1. N1 from Vaal River to Misgund Interchange
2. N4 from Rebecca Street to Pelindaba
3. N4 from Proefplaas Interchange to Solomon Mahlangu Interchange
4. N17 from Rifle Range to R29 Springs Intersection

## **What projects are in SANRAL's pipeline in the medium-to-long term in Gauteng?**

Periodic maintenance on some sections of the GFIP network is planned to begin in 2020. This is also part of SANRAL's asset-preservation strategy. The projects are on the following sections:

1. N1 from Golden Highway to Scientia
2. N3 from Heidelberg Road to Buccleuch
3. N12 from Uncle Charlies to Tom Jones
4. R21 from Pomona to Hans Strydom

## **Why is it important to maintain, improve and strengthen strategic routes?**

SANRAL's asset-preservation and maintenance strategies enable the agency to optimise the use of resources. Projects are selected from SANRAL's well-established and documented pavement management system, which is used to optimise available funding and ensure that roads remain at the adequate level of service.

Improved roads address traffic congestion, which leads to a reduction of travel time and fatalities, and improved productivity, thus improving quality of life for many people in the province.

## **How is SANRAL making a contribution towards SMME development and local job creation in Gauteng?**

Suitably qualified emerging enterprises are given an opportunity to perform some of the work awarded to main contractors. As per government's policy for SMME development, main contractors are required to subcontract a minimum of 30% of the contract value to SMMEs of CIDB grading 1 to 6.

As a result of the government's preferential procurement regulations, which came into effect on 1 April 2017, contracts above R30m will require a minimum of 30% of the value of the contract to be subcontracted to others. SANRAL has adjusted its procurement model to comply with these regulations. In future, smaller contractors will benefit from SANRAL's projects through subcontracting.

In terms of job creation, main contractors are required to allocate 6% of the value of work to the employment of local labour. Importantly, part of the contract between SANRAL and main contractors is that training will be provided to all the people recruited for the projects.

SANRAL has structured its routine road maintenance projects in such a way that the use of local labour and subcontractors is maximised.

## **How important are roads to the Gauteng economy?**

Gauteng is the economic hub of South Africa. Improved roads lead to time saving, which contributes to the growth of the economy, benefitting both the province and the country. A well-functioning road network supports all other sectors of the economy.

## **How do I bring road conditions to SANRAL's attention?**

All SANRAL-managed roads have road signs that display contact numbers for which road conditions on the specific road can be reported.

**Otherwise, SANRAL's Northern Regional Office can be contacted during office hours on 012 426 6200.**



# WHAT YOU SAID

Earlier this year we set off to petroports along the N1 and N4 to promote the use of tags to pay toll fees. Here’s what road users at the Grasmere 1-Stop had to say about it...



**Thabo Chomane**

“My perception of e-tags is that it’s a good thing. Many of us are going to get it and many of us are going to ‘Jump the Q’. This is good; I like the promotion. Keep it up, SANRAL.”



**Moeketsi Tsueu**

Moeketsi frequently travels to Johannesburg to purchase cars on auction. “I’m glad I met you guys here, you made it easy for me. I have been trying to get a tag, but I never had time.”



**Dimakatso Matlala**

“I work in Devland so I travel to JHB every day. Some days I try to use the Golden Highway, but it’s not worth it. Most of the time I use the N1 and I have to pay cash. At least I have the tag now, so you guys have saved me time. It’s very good.”

## EMPOWERING THE DISABLED

SANRAL subcontractor Babore Gauteng is a beacon of hope for the disabled workers who are employed at the company’s “broom factory”. At Babore, disabled workers from Alexandra manufacture brooms, which are fitted to the automated cleaning machines used to clean SANRAL-managed freeways



**Sandile Tshabalala**

Production worker

(joined in 2014)

“This job has changed my life.”

**Ntando Mbabani**

Production worker

(joined in August 2017)

“This work changed my life. Before this job, I wasn’t doing anything. I was sitting at home having nothing but trying my best to see what I could do. Finding this job has changed my life.”

**Gift Langa**

Production worker

(joined in March 2017)

“A friend of mine recommended me for this job. I prepared and submitted my CV. When I started working here I was happy that I could be like other people who earn an income. I am very happy at this job. I had only done piece-jobs in the past.”

**Jacqueline Sibanda**

Production worker

(joined in February 2017)

“This job has helped me a lot, because before I was unemployed. I can now do my own things; I don’t have to ask. I can provide for myself and my family.”





# PROJECT SNIPPETS



## TSHWANE BRT STATIONS BLEND IN

THE design of new bus stations for the Tshwane Rapid Transit System balances the historic significance of buildings in the capital with the city's needs for a modern transport system. SANRAL has managed the design and construction of the bus stations.



## ROADS READY FOR RAINY SEASON

EXCEPTIONALLY high rainfall may cause flooding on urban freeways, but SANRAL is prepared for this summer's rainy season. Following extreme flash floods in November 2016, SANRAL engineers conducted a thorough inspection of the primary road infrastructure and ensured it was safe. After every major rainfall, culverts and drainage systems are checked and cleared of debris. SANRAL is currently looking at how these systems can be improved. This will be done in collaboration with provincial and local governments in Gauteng to find solutions for the runoff that occurs when flash-floods hit the province.



## ROUTINE ROAD MAINTENANCE

SANRAL has eight maintenance contracts for all the Gauteng freeways it manages – three for managing the lights on the freeways and five for routine road maintenance (RRM) activities, which include pavement, drainage, vegetation and road-side maintenance, traffic signs and road furniture, protection work, emergency assistance and structural repairs. Through RRM, SANRAL promotes empowerment opportunities for small, medium and micro enterprises (SMMEs). Not only does RRM provide viable and sustainable opportunities for SMMEs, main contractors and consulting engineers also benefit. In SANRAL's drive to ensure equitable access to its procurement opportunities, the RRM model has proven to be successful in the mentorship and training of SMMEs.